

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

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1. (original): A method comprising:  
calculating a plurality of correction factors, each correction factor relating to a position of at least a corresponding one among a set of physical objects; and  
transmitting said plurality of correction factors in a predetermined order,  
wherein said correspondence of each among said plurality of correction factors with at least one among the set of physical objects is indicated at least in part by said predetermined order.
  2. (original): The method according to claim 1, wherein at least one among said plurality of correction factors relates to a correction to a determination of a position.
  3. (original): The method according to claim 1, wherein at least one among said plurality of correction factors relates to a correction to a determination of a position at a predetermined future time.
  4. (original): The method according to claim 1, wherein said predetermined order relates to a relative arrangement of the physical objects.
  5. (original): The method according to claim 4, wherein said relative arrangement is effective at a future time.
  6. (original): The method according to claim 4, wherein said relative arrangement relates to elevation angles of the physical objects.
  7. (original): The method according to claim 1, wherein said predetermined order is determined at least in part by a relative order of the elevation angles of the physical objects.
  8. (original): The method according to claim 1, wherein at least one among said plurality of correction factors is based at least in part on a signal received from at least one among the set of physical objects.

9. (original): The method according to claim 1, wherein at least one among the set of physical objects is a space vehicle.

10. (original): The method according to claim 1, wherein each among the set of physical objects is a space vehicle, each space vehicle having an identification number relating to a Global Positioning System, and

wherein said predetermined order is determined at least in part by a relative order of the identification numbers of the space vehicles.

11. (original): The method according to claim 1, said method further comprising transmitting information relating to a time of validity of said plurality of correction factors.

12. (original): The method according to claim 1, wherein said calculating a plurality of correction factors comprises:

computing a reference position of each among the set of physical objects; and  
computing a supplemental position of each among the set of physical objects,  
wherein each among said correction factors is based at least in part on a difference between said corresponding reference and supplemental positions.

13. (original): The method according to claim 12, said method further comprising determining the existence of a potential ambiguity between at least two of said reference positions.

14. (original): The method according to claim 13, wherein said potential ambiguity relates to a relation between elevation angles of at least two among the set of physical objects.

15. (original): The method according to claim 13, wherein said potential ambiguity relates to a relation between an elevation mask angle and an elevation angle of at least one among the set of physical objects.

16. (original): The method according to claim 12,

wherein each among said reference positions is based at least in part on almanac information, and

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wherein each among said supplemental positions is based at least in part on ephemeris information.

17. (original): The method according to claim 16, wherein said almanac information is received from at least one of said space vehicles.

18 (currently amended): An apparatus comprising a data storage medium, said data storage medium having machine-readable code stored thereon, ~~the machine-readable code~~ including instructions executable by ~~an array of logic elements~~ a digital signal processing unit, ~~the instructions defining a method including~~ comprising:

machine readable code for calculating a plurality of correction factors, each correction factor relating to a position of at least a corresponding one among a set of physical objects; and

machine readable code for causing ~~transmitting~~ said plurality of correction factors to be transmitted in a predetermined order without transmitting information related to identities of said physical objects,

wherein said correspondence of each among said plurality of correction factors with at least one among the set of physical objects is indicated at least in part by said predetermined order.

19 (currently amended): The apparatus according to claim 18, wherein said machine readable code for calculating a plurality of correction factors comprises:

machine readable code for computing a reference position of each among the set of physical objects; and

machine readable code for computing a supplemental position of each among the set of physical objects,

wherein each among said correction factors is based at least in part on a difference between said corresponding reference and supplemental positions.

20. (original): An apparatus comprising:

a reference position calculator configured and arranged to calculate a reference position for each among a plurality of physical objects;

a supplemental position calculator configured and arranged to calculate a supplemental position for each among the plurality of physical objects; and

a correction factor calculator configured and arranged to receive said reference positions and said supplemental positions and to output a plurality of correction factors in a predetermined order,

wherein each correction factor relates to a position of at least a corresponding one among the plurality of physical objects, and

wherein said correspondence of each among said plurality of correction factors with at least one among the plurality of physical objects is indicated at least in part by said predetermined order.

21. (original): The apparatus according to claim 20, wherein at least one among the set of physical objects is a space vehicle.

22. (original): A system comprising:

a receiver configured and arranged to receive signals from at least one among a plurality of physical objects;

a position determining entity including

a reference position calculator configured and arranged to calculate a reference position for each among the plurality of physical objects;

a supplemental position calculator configured and arranged to calculate a supplemental position for each among the plurality of physical objects; and

a correction factor calculator configured and arranged to receive said reference positions and said supplemental positions and to output a plurality of correction factors, and

a transmitter configured and arranged to transmit the plurality of correction factors,

wherein said plurality of correction factors is transmitted in a predetermined order,

and

wherein each correction factor relates to a position of at least a corresponding one among the plurality of physical objects, and

wherein said correspondence of each among said plurality of correction factors with at least one among the plurality of physical objects is indicated at least in part by said predetermined order.

23. (original): The system according to claim 22, wherein at least one among the set of physical objects is a space vehicle.

24. (currently amended): A method comprising:

receiving information relating to ~~a position of at least one among a set~~ positions of respective physical objects;

determining ~~a reference position~~ reference positions of ~~one among the set of said~~ physical objects, said determining being based at least in part on said information;

receiving a plurality of correction factors in a predetermined order without receiving information relating to identities of said physical objects; and

correlating said correction factors with respective ones of said reference positions using said predetermined order to identify said respective ones of said physical objects, and

applying ~~a corresponding one among said plurality of~~ corresponding correction factors to said reference positions~~[[.]].~~

~~wherein said correspondence between said corresponding one among said plurality of correction factors and said reference position is indicated at least in part by said predetermined order.~~

25. (original): The method according to claim 24, wherein at least one among the set of physical objects is a space vehicle.

26 (new): A method comprising:

calculating a plurality of correction factors, each correction factor relating to a position of at least a corresponding one among a set of physical objects; and

transmitting said plurality of correction factors in a predetermined order, without transmitting information related to identities of said physical objects;

wherein said correspondence of each among said plurality of correction factors with at least one among the set of physical objects is indicated at least in part by said predetermined order.

27 (new) The method according to claim 26, wherein at least one among said plurality of correction factors relates to a correction to a determination of a position.

28 (new): The method according to claim 26, wherein at least one among said plurality of correction factors relates to a correction to a determination of a position at a predetermined future time.

29 (new): The method according to claim 26, wherein said predetermined order relates to a relative arrangement of the physical objects.

30 (new): The method according to claim 29, wherein said relative arrangement is effective at a future time.

31 (new): The method according to claim 29, wherein said relative arrangement relates to elevation angles of the physical objects.

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32 (new): The method according to claim 26, wherein said predetermined order is determined at least in part by a relative order of the elevation angles of the physical objects.

33 (new): The method according to claim 26, wherein at least one among said plurality of correction factors is based at least in part on a signal received from at least one among the set of physical objects.

34 (new): The method according to claim 26, wherein at least one among the set of physical objects is a space vehicle.

35 (new): The method according to claim 26, wherein each among the set of physical objects is a space vehicle, each space vehicle having an identification number relating to a Global Positioning System, and

wherein said predetermined order is determined at least in part by a relative order of the identification numbers of the space vehicles.

36 (new): The method according to claim 26, said method further comprising transmitting information relating to a time of validity of said plurality of correction factors.

37 (new): The method according to claim 26, wherein said calculating a plurality of correction factors comprises:

    computing a reference position of each among the set of physical objects; and  
    computing a supplemental position of each among the set of physical objects,  
wherein each among said correction factors is based at least in part on a difference between said corresponding reference and supplemental positions.

38 (new): The method according to claim 37, said method further comprising determining the existence of a potential ambiguity between at least two of said reference positions.

39 (new): The method according to claim 38, wherein said potential ambiguity relates to a relation between elevation angles of at least two among the set of physical objects.

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40 (new): The method according to claim 38, wherein said potential ambiguity relates to a relation between an elevation mask angle and an elevation angle of at least one among the set of physical objects.

41 (new): The method according to claim 37,

    wherein each among said reference positions is based at least in part on almanac information, and

    wherein each among said supplemental positions is based at least in part on ephemeris information.

42 (new): The method according to claim 41, wherein said almanac information is received from at least one space vehicle.

43 (new): A method comprising:

    calculating a plurality of correction factors, each correction factor relating to a position of at least a corresponding one among a set of physical objects determined by at least a difference between reference and supplemental positions of each among the set of physical objects;

    transmitting said plurality of correction factors in a predetermined order;

wherein said correspondence of each among said plurality of correction factors with at least one among the set of physical objects is indicated at least in part by said predetermined order.

44 (new): The method according to claim 43, wherein at least one among said plurality of correction factors relates to a correction to a determination of a position.

45 (new): The method according to claim 43, wherein at least one among said plurality of correction factors relates to a correction to a determination of a position at a predetermined future time.

46 (new): The method according to claim 43, wherein said predetermined order relates to a relative arrangement of the physical objects.

47 (new): The method according to claim 46, wherein said relative arrangement is effective at a future time.

48 (new): The method according to claim 46, wherein said relative arrangement relates to elevation angles of the physical objects.

49 (new): The method according to claim 43, wherein said predetermined order is determined at least in part by a relative order of the elevation angles of the physical objects.

50 (new): The method according to claim 43, wherein at least one among said plurality of correction factors is based at least in part on a signal received from at least one among the set of physical objects.

51 (new): The method according to claim 43, wherein at least one among the set of physical objects is a space vehicle.

52 (new): The method according to claim 43, wherein each among the set of physical objects is a space vehicle, each space vehicle having an identification number relating to a Global Positioning System, and

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wherein said predetermined order is determined at least in part by a relative order of the identification numbers of the space vehicles.

53 (new): The method according to claim 43, said method further comprising transmitting information relating to a time of validity of said plurality of correction factors.

54 (new): The method according to claim 43, said method further comprising determining the existence of a potential ambiguity between at least two of said reference positions.

55 (new): The method according to claim 54, wherein said potential ambiguity relates to a relation between elevation angles of at least two among the set of physical objects.

56 (new): The method according to claim 54, wherein said potential ambiguity relates to a relation between an elevation mask angle and an elevation angle of at least one among the set of physical objects.

57 (new): The method according to claim 43,  
wherein each among said reference positions is based at least in part on almanac information, and  
wherein each among said supplemental positions is based at least in part on ephemeris information.

58 (new): The method according to claim 57, wherein said almanac information is received from at least one space vehicle.

59 (new): A method comprising:  
calculating a plurality of correction factors, each relating to a respective one of a set of satellites; and  
transmitting said plurality of correction factors in a predetermined order from a base station to a mobile station;  
wherein said predetermined order is known to both said base station and said mobile station; and

wherein a correspondence of each correction factor with each satellite is indicated at least in part by said predetermined order.

60 (new) The method according to claim 59, wherein at least one among said plurality of correction factors relates to a correction to a determination of a position.

61 (new): The method according to claim 59, wherein at least one among said plurality of correction factors relates to a correction to a determination of a position at a predetermined future time.

62 (new): The method according to claim 59, wherein said predetermined order relates to a relative arrangement of the physical objects.

63 (new): The method according to claim 62, wherein said relative arrangement is effective at a future time.

64 (new): The method according to claim 62, wherein said relative arrangement relates to elevation angles of the physical objects.

65 (new): The method according to claim 59, wherein said predetermined order is determined at least in part by a relative order of the elevation angles of the physical objects.

66 (new): The method according to claim 59, wherein at least one among said plurality of correction factors is based at least in part on a signal received from at least one among the set of physical objects.

67 (new): The method according to claim 59, wherein at least one among the set of physical objects is a space vehicle.

68 (new): The method according to claim 59, wherein each among the set of physical objects is a space vehicle, each space vehicle having an identification number relating to a Global Positioning System, and

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wherein said predetermined order is determined at least in part by a relative order of the identification numbers of the space vehicles.

69 (new): The method according to claim 59, said method further comprising transmitting information relating to a time of validity of said plurality of correction factors.

70 (new): The method according to claim 59, said method further comprising determining the existence of a potential ambiguity between at least two of said reference positions.

71 (new): The method according to claim 70, wherein said potential ambiguity relates to a relation between elevation angles of at least two among the set of physical objects.

72 (new): The method according to claim 70, wherein said potential ambiguity relates to a relation between an elevation mask angle and an elevation angle of at least one among the set of physical objects.

73 (new): The method according to claim 59,  
wherein each among said reference positions is based at least in part on almanac information, and  
wherein each among said supplemental positions is based at least in part on ephemeris information.

74 (new): The method according to claim 73, wherein said almanac information is received from at least one space vehicle.

75 (new): A system for transmitting a plurality of correction factors to a mobile station configured to receive said correction factors, and to associate said correction factors with particular satellite signals in dependence upon a predetermined order that said correction factors are received and to use said correction factors in a determination of a location of said mobile station, comprising:

- a base station at a fixed location for receiving signals from a plurality of satellites;
- a position determining entity associated with said base station, including;

a reference position calculator for calculating a reference position for each of said satellites from said signals;

a supplemental position calculator for calculating a supplemental position for each of said satellites from said signals;

a correction factor calculator for producing a respective plurality of correction factors for each of said satellites from said reference and supplemental positions; and

means for arranging said correction factors in a predetermined order with respect to respective identities of said satellites; and

a transmitter associated with said base station for transmitting the plurality of correction factors.

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76 (new): The system of claim 75 wherein said means for arranging said correction factors in a predetermined order with respect to respective identities of said satellites arranges said correction factors in an order of ascending azimuth angle of said satellites.

77 (new): The system of claim 75 wherein said means for arranging said correction factors in a predetermined order with respect to respective identities of said satellites arranges said correction factors in an order of descending azimuth angle of said satellites.

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